

**Montana Board of Oil and Gas Conservation
Environmental Assessment**

Operator: Sands Oil Company
Well Name/Number: New Miami Colony #42-20H
Location: SW NW Section 21 T28N R5W
County: Pondera MT; **Field (or Wildcat)** Wildcat

Air Quality

(possible concerns)

Long drilling time: No, 5 to 10 days drilling time.

Unusually deep drilling (high horsepower rig): No, single derrick drilling rig to drill to 5455' MD/2995' TVD in the Sun River Dolomite of the Madison Formation.

Possible H₂S gas production: Yes, slight.

In/near Class I air quality area: No Class I air quality area.

Air quality permit for flaring/venting (if productive): Yes, DEQ air quality permit required under 75-2-211.

Mitigation:

☒ Air quality permit (AQB review)

☐ Gas plants/pipelines available for sour gas

☐ Special equipment/procedures requirements

☐ Other: _____

Comments: No special concerns – using small rig to drill to 5455' MD/2995' TVD.

Water Quality

(possible concerns)

Salt/oil based mud: No, freshwater and freshwater mud system on surface and mainhole. Horizontal lateral will be drilled with freshwater.

High water table: None anticipated

Surface drainage leads to live water: Yes, nearest drainages are an unnamed ephemeral tributary drainage to Spring Creek, about 1/8 of a mile to the southeast of this location and an unnamed ephemeral tributary drainage to Dry Fork Marias River, about 1/4 of a mile to the west from this location.

Water well contamination: No, closest water wells are about 1 mile and further in any direction from this location. This well will drill to 500' with freshwater, set 500' of steel surface casing and cement it to surface to protect surface and ground waters.

Porous/permeable soils: No, sandy bentonitic soils.

Class I stream drainage: No Class I stream drainages in the area of review.

Mitigation:

☐ Lined reserve pit

☒ Adequate surface casing

☐ Berms/dykes, re-routed drainage

☐ Closed mud system

☐ Off-site disposal of solids/liquids (in approved facility)

☐ Other: _____

Comments: 50 0' of surface casing will be set and cemented to surface adequate to protect freshwater zones. Also, fresh water mud systems to be used.

Soils/Vegetation/Land Use

(possible concerns)

Stream crossings: No, no drainages will be crossed.

High erosion potential: No, moderate cut, up to 13.0' and moderate fill, up to 13.9', required.

Loss of soil productivity: No, location will be restored after drilling, if nonproductive. If productive unused portion of drillsite will be reclaimed.

Unusually large wellsite: No, 310'X300' location size required.

Damage to improvements: Slight, surface use is grassland.

Conflict with existing land use/values: Slight, surface use grassland.

Mitigation

☐ Avoid improvements (topographic tolerance)

☐ Exception location requested

☒ Stockpile topsoil

☐ Stream Crossing Permit (other agency review)

☒ Reclaim unused part of wellsite if productive

☐ Special construction methods to enhance reclamation

☐ Other _____

Comments: Access will be through existing county roads, East Lake County Road. A short access will be built into this location of about 657' off the county road. Drilling and reserve pit will be unlined earthen pits. Reserve pit and drill pit fluids and cuttings will be allowed to dry in the pits. Once pits are dry, they will be filled with subsoil and the topsoil will be the last cover. No special concerns

Health Hazards/Noise

(possible concerns)

Proximity to public facilities/residences: None nearby. Closest residence is about 1.3 mile to the east southeast of this location.

Possibility of H₂S: Slight

Size of rig/length of drilling time: Small drilling rig/short 5 to 10 days drilling time.

Mitigation:

☒ Proper BOP equipment

☐ Topographic sound barriers

☐ H₂S contingency and/or evacuation plan

☐ Special equipment/procedures requirements

☐ Other: _____

Comments: Adequate surface casing and working BOP should mitigate any problems. No concerns.

Wildlife/recreation

(possible concerns)

Proximity to sensitive wildlife areas (DFWP identified): None identified.

Proximity to recreation sites: None identified

Creation of new access to wildlife habitat: No

Conflict with game range/refuge management: No

Threatened or endangered Species: Species identified as threatened or endangered are the Piping Plover, Grizzly Bear, Gray Wolf and the Canada Lynx. Candidate species

are the Sprague's Pipit and the Wolverine. NH tracker website lists the Ferruginous Hawk as the only species of concern.

Mitigation:

- ☐ Avoidance (topographic tolerance/exception)
- ☐ Other agency review (DFWP, federal agencies, DSL)
- ☐ Screening/fencing of pits, drillsite
- ☐ Other: _____

Comments: Private grasslands. Species listed on the NH tracker website is the Ferruginous Hawk is mobile enough and should not be impacted by the drilling of this well. Typically, nests high up on trees and poles. This wellsite is close to a county road and cultivated grain fields. No concerns.

Historical/Cultural/Paleontological

(possible concerns)

Proximity to known sites: None identified.

Mitigation

- ☐ avoidance (topographic tolerance, location exception)
- ☐ other agency review (SHPO, DSL, federal agencies)
- ☐ Other: _____

Comments: Private grasslands. No concerns.

Social/Economic

(possible concerns)

- ☐ Substantial effect on tax base
- ☐ Create demand for new governmental services
- ☐ Population increase or relocation

Comments: No concerns.

Remarks or Special Concerns for this site

Well is a 5455'MD/2995'TVD horizontal Madison Formation test.

Summary: Evaluation of Impacts and Cumulative effects

No significant impacts expected in the drilling of this oil well. Some short term surface impacts will occur.

I conclude that the approval of the subject Notice of Intent to Drill (does/**does not**) constitute a major action of state government significantly affecting the quality of the human environment, and (does/**does not**) require the preparation of an environmental impact statement.

Prepared by (BOGC): /s/Steven Sasaki

(title:) Chief Field Inspector

Date: May 2, 2011

Other Persons Contacted:

Montana Bureau of Mines and Geology, GWIC
website

(Name and Agency)

Pondera County water wells.

(subject discussed)

May 2, 2011

(date)

US Fish and Wildlife, Region 6 website

(Name and Agency)

ENDANGERED, THREATENED, PROPOSED AND CANDIDATE SPECIES

MONTANA COUNTIES, Pondera County

(subject discussed)

May 2, 2011

(date)

Montana Natural Heritage Program Website (FWP)

(Name and Agency)

Heritage State Rank= S1, S2, S3 mammals and birds T28N R5W

(subject discussed)

May 2, 2011

(date)

If location was inspected before permit approval:

Inspection date: _____

Inspector: _____

Others present during inspection: _____